

**Listing of Claims:**

Claims 1-55 cancelled.

56. (Previously Presented) A method for synthesizing and introducing latency into the synthesis of a polymer array, said polymer array selected from the group consisting of an oligonucleotide array and a peptide array, on a substrate comprising the steps of:

- a) providing a surface having one or more synthesis intermediates bound thereon, said synthesis intermediates selected from the group consisting of a linker, a nucleotide, an amino acid, a peptide and an oligonucleotide, and the synthesis intermediates having a reactive group protected from reaction by a first photosensitive protecting group, said first protecting group having a first wavelength of light which removes said protecting group from said reactive group;
- b) coating said surface with a substance comprising a photobleachable compound, wherein said photobleachable compound absorbs light having said first wavelength;
- c) irradiating at least a part of said surface with light having said first wavelength to:
  - i) bleach said photobleachable compound; and
  - ii) remove said protective group;
- d) removing said substance from said surface;
- e) reacting a subsequently added synthesis intermediate, said subsequently added synthesis intermediate selected from the group consisting of a linker, a nucleotide, an amino acid, a peptide and an oligonucleotide, with the unprotected reactive group, the subsequently added synthesis intermediate having a reactive group protected from reaction by a second photosensitive protective protecting group, wherein said first and second photosensitive protecting groups are the same or different and said protecting group having a second wavelength of light which removes said protecting group from said reactive group, wherein said first and said second wavelengths of light are the same or different;

- f) recoating said surface with a substance comprising a photobleachable compound, wherein said photobleachable compound absorbs light having said second wavelength; if another synthesis intermediate is to be added; and
- g) repeating steps b) through f) or not, until the desired polymer array is obtained.

Claims 57-59 are cancelled.

- 60. (Previously presented) The method of claims 56 wherein said synthesis intermediate is a nucleotide.
- 61. (Withdrawn) The methods of claims 56 and 57 wherein said synthesis intermediate is a polynucleotide.
- 62. (Withdrawn) The methods of claims 56 and 57 wherein said synthesis intermediate is an amino acid.

Claim 63 is cancelled.

- 64. (Previously presented) The method of claims 56 wherein said photobleachable compound is a photobleachable dye.
- 65. (Previously presented) The method of claim 64 wherein said photobleachable dye is pyrylium dye or diazonium dye.

Claims 66-79 are cancelled.

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